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PAGE: 1

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/591,632

DATE: 06/16/2000
 TIME: 19:54:42

Input Set: I591632.RAW

**This Raw Listing contains the General Information
 Section and up to first 5 pages.**

1 <110> APPLICANT: Lindquist, Susan
 2 Li, Liming
 3 Ma, Jiyan
 4 Liu, Jia-Jia
 5 Sondheimer, Neal
 6 Scheibel, Thomas
 7 <120> TITLE OF INVENTION: RECOMBINANT PRION-LIKE GENES AND PROTEINS AND MATERIALS
 8 AND METHODS COMPRISING SAME
 9 <130> FILE REFERENCE: 27373
 10 <140> CURRENT APPLICATION NUMBER: US/09/591,632
 11 <141> CURRENT FILING DATE: 2000-06-09
 12 <150> EARLIER APPLICATION NUMBER: US 06/138,833
 13 <151> EARLIER FILING DATE: 1999-06-09
 14 <160> NUMBER OF SEQ ID NOS: 65
 15 <170> SOFTWARE: PatentIn Ver. 2.0
 16 <210> SEQ ID NO 1
 17 <211> LENGTH: 3321
 18 <212> TYPE: DNA
 19 <213> ORGANISM: Saccharomyces cerevisiae
 20 <220> FEATURE:
 21 <221> NAME/KEY: CDS
 22 <222> LOCATION: (739)..(2796)
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 26 attggagttt gaagaaaatc ccaaccctac gtagaaaaat tgaatatcgat atctgtttat 180
 27 acacacatac atacatttat atttataata agcgttaaaa tttccggcaga atatctgtca 240
 28 accacacaaa aatcatatacaa cgaatggtat atgcttcatt tctttgtttc gcatttagctg 300
 29 cgctatttga ctcaaattat tatttttac taagacgcgc cgtcacagtgc ttgcagtcg 360
 30 tgtcatttct ttgttaattc tcttaaacca cttcataaaat ttgtgaagtt catagcaaaa 420
 31 ttcttccgca aaaagatgaa tcttagtttct cagccccacca aaagaggatc atgctaagat 480
 32 catacagaag ttattgtcac ttcttacctt gctttaaat gtacattaca accgggtatt 540
 33 atatcttaca tcatacgata atatgtatctt tctttatgaa gaaaattttt ttttcaactcg 600
 34 accaaagctc ccattgcttc tgaagagtgt agtgtatatt ggtacatctt ctcttgaaag 660
 35 actccattgt actgtAACAA aaagcggttt cttcatcgac ttgcggaa taacatctat 720
 36 atctgcccac tagcaaca atg tcg gat tca aac caa ggc aac aat cag caa 771
 37 Met Ser Asp Ser Asn Gln Gly Asn Asn Gln Gln
 38 1 5 10
 39 aac tac cag caa tac agc cag aac ggt aac caa caa ggt aac aac 819
 40 Asn Tyr Gln Gln Tyr Ser Gln Asn Gly Asn Gln Gln Gly Asn Asn
 41 15 20 25
 42 aga tac caa ggt tat caa gct tac aat gct caa gcc caa cct gca ggt 867
 43 Arg Tyr Gln Gly Tyr Gln Ala Tyr Asn Ala Gln Pro Ala Gly
 44 30 35 40

PAGE: 2

RAW SEQUENCE LISTING
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| 46 | Gly Tyr Tyr Gln Asn Tyr Gln Gly Tyr Ser Gly Tyr Gln Gln Gly Gly | |
| 47 | 45 50 55 | |
| 48 | tat caa cag tac aat ccc gac gcc ggt tac cag caa cag tat aat cct | 963 |
| 49 | Tyr Gln Gln Tyr Asn Pro Asp Ala Gly Tyr Gln Gln Gln Tyr Asn Pro | |
| 50 | 60 65 70 75 | |
| 51 | caa gga ggc tat caa cag tac aat cct caa ggc ggt tat cag cag caa | 1011 |
| 52 | Gln Gly Gly Tyr Gln Gln Tyr Asn Pro Gln Gly Gly Tyr Gln Gln Gln | |
| 53 | 80 85 90 | |
| 54 | ttc aat cca caa ggt ggc cgt gga aat tac aaa aac ttc aac tac aat | 1059 |
| 55 | Phe Asn Pro Gln Gly Gly Arg Gly Asn Tyr Lys Asn Phe Asn Tyr Asn | |
| 56 | 95 100 105 | |
| 57 | aac aat ttg caa gga tat caa gct ggt ttc caa cca cag tct caa ggt | 1107 |
| 58 | Asn Asn Leu Gln Gly Tyr Gln Ala Gly Phe Gln Pro Gln Ser Gln Gly | |
| 59 | 110 115 120 | |
| 60 | atg tct ttg aac gac ttt caa aag caa caa aag cag gcc gct ccc aaa | 1155 |
| 61 | Met Ser Leu Asn Asp Phe Gln Lys Gln Gln Lys Gln Ala Ala Pro Lys | |
| 62 | 125 130 135 | |
| 63 | cca aag aag act ttg aag ctt gtc tcc agt tcc ggt atc aag ttg gcc | 1203 |
| 64 | Pro Lys Lys Thr Leu Lys Leu Val Ser Ser Gly Ile Lys Leu Ala | |
| 65 | 140 145 150 155 | |
| 66 | aat gct acc aag aag gtt ggc aca aaa cct gcc gaa tct gat aag aaa | 1251 |
| 67 | Asn Ala Thr Lys Lys Val Gly Thr Lys Pro Ala Glu Ser Asp Lys Lys | |
| 68 | 160 165 170 | |
| 69 | gag gaa gag aag tct gct gaa acc aaa gaa cca act aaa gag cca aca | 1299 |
| 70 | Glu Glu Glu Lys Ser Ala Glu Thr Lys Glu Pro Thr Lys Glu Pro Thr | |
| 71 | 175 180 185 | |
| 72 | aag gtc gaa gaa cca gtt aaa aag gag gag aaa cca gtc cag act gaa | 1347 |
| 73 | Lys Val Glu Glu Pro Val Lys Lys Glu Glu Lys Pro Val Gln Thr Glu | |
| 74 | 190 195 200 | |
| 75 | gaa aag acg gag gaa aaa tcg gaa ctt cca aag gta gaa gac ctt aaa | 1395 |
| 76 | Glu Lys Thr Glu Glu Lys Ser Glu Leu Pro Lys Val Glu Asp Leu Lys | |
| 77 | 205 210 215 | |
| 78 | atc tct gaa tca aca cat aat acc aac aat gcc aat gtt acc agt gct | 1443 |
| 79 | Ile Ser Glu Ser Thr His Asn Thr Asn Asn Ala Asn Val Thr Ser Ala | |
| 80 | 220 225 230 235 | |
| 81 | gat gcc ttg atc aag gaa cag gaa gaa gtg gat gac gaa gtt gtt | 1491 |
| 82 | Asp Ala Leu Ile Lys Glu Gln Glu Glu Val Asp Asp Glu Val Val | |
| 83 | 240 245 250 | |
| 84 | aac gat atg ttt ggt aaa gat cac gtt tct tta att ttc atg ggt | 1539 |
| 85 | Asn Asp Met Phe Gly Gly Lys Asp His Val Ser Leu Ile Phe Met Gly | |
| 86 | 255 260 265 | |
| 87 | cat gtt gat gcc ggt aaa tct act atg ggt aat cta cta tac ttg | 1587 |
| 88 | His Val Asp Ala Gly Lys Ser Thr Met Gly Gly Asn Leu Leu Tyr Leu | |
| 89 | 270 275 280 | |
| 90 | act ggc tct gtg gat aag aga act att gag aaa tat gaa aga gaa gcc | 1635 |
| 91 | Thr Gly Ser Val Asp Lys Arg Thr Ile Glu Lys Tyr Glu Arg Glu Ala | |
| 92 | 285 290 295 | |
| 93 | aag gat gca ggc aga caa ggt tgg tac ttg tca tgg gtc atg gat acc | 1683 |
| 94 | Lys Asp Ala Gly Arg Gln Gly Trp Tyr Leu Ser Trp Val Met Asp Thr | |

PAGE: 3

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/591,632

 DATE: 06/16/2000
 TIME: 19:54:42

Input Set: I591632.RAW

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| 97 | Asn Lys Glu Glu Arg Asn Asp Gly Lys Thr Ile Glu Val Gly Lys Ala | | | |
| 98 | 320 | 325 | 330 | |
| 99 | tac ttt gaa act gaa aaa agg cgt tat acc ata ttg gat gct cct ggt | | | 1779 |
| 100 | Tyr Phe Glu Thr Glu Lys Arg Arg Tyr Thr Ile Leu Asp Ala Pro Gly | | | |
| 101 | 335 | 340 | 345 | |
| 102 | cat aaa atg tac gtt tcc gag atg atc ggt ggt gct tct caa gct gat | | | 1827 |
| 103 | His Lys Met Tyr Val Ser Glu Met Ile Gly Gly Ala Ser Gln Ala Asp | | | |
| 104 | 350 | 355 | 360 | |
| 105 | gtt ggt gtt ttg gtc att tcc gcc aga aag ggt gag tac gaa acc ggt | | | 1875 |
| 106 | Val Gly Val Leu Val Ile Ser Ala Arg Lys Gly Glu Tyr Glu Thr Gly | | | |
| 107 | 365 | 370 | 375 | |
| 108 | ttt gag aga ggt ggt caa act cgt gaa cac gcc cta ttg gcc aag acc | | | 1923 |
| 109 | Phe Glu Arg Gly Gly Gln Thr Arg Glu His Ala Leu Leu Ala Lys Thr | | | |
| 110 | 380 | 385 | 390 | 395 |
| 111 | caa ggt gtt aat aag atg gtt gtc gtc gta aat aag atg gat gac cca | | | 1971 |
| 112 | Gln Gly Val Asn Lys Met Val Val Val Asn Lys Met Asp Asp Pro | | | |
| 113 | 400 | 405 | 410 | |
| 114 | acc gtt aac tgg tct aag gaa cgt tac gac caa tgt gtg agt aat gtc | | | 2019 |
| 115 | Thr Val Asn Trp Ser Lys Glu Arg Tyr Asp Gln Cys Val Ser Asn Val | | | |
| 116 | 415 | 420 | 425 | |
| 117 | agc aat ttc ttg aga gca att ggt tac aac att aag aca gac gtt gta | | | 2067 |
| 118 | Ser Asn Phe Leu Arg Ala Ile Gly Tyr Asn Ile Lys Thr Asp Val Val | | | |
| 119 | 430 | 435 | 440 | |
| 120 | ttt atg cca gta tcc ggc tac agt ggt gca aat ttg aaa gat cac gta | | | 2115 |
| 121 | Phe Met Pro Val Ser Gly Tyr Ser Gly Ala Asn Leu Lys Asp His Val | | | |
| 122 | 445 | 450 | 455 | |
| 123 | gat cca aaa gaa tgc cca tgg tac acc ggc cca act ctg tta gaa tat | | | 2163 |
| 124 | Asp Pro Lys Glu Cys Pro Trp Tyr Thr Gly Pro Thr Leu Leu Glu Tyr | | | |
| 125 | 460 | 465 | 470 | 475 |
| 126 | ctg gat aca atg aac cac gtc gac cgt cac atc aat gct cca ttc atg | | | 2211 |
| 127 | Leu Asp Thr Met Asn His Val Asp Arg His Ile Asn Ala Pro Phe Met | | | |
| 128 | 480 | 485 | 490 | |
| 129 | ttg cct att gcc gct aag atg aag gat cta ggt acc atc gtt gaa ggt | | | 2259 |
| 130 | Leu Pro Ile Ala Ala Lys Met Lys Asp Leu Gly Thr Ile Val Glu Gly | | | |
| 131 | 495 | 500 | 505 | |
| 132 | aaa att gaa tcc ggt cat atc aaa aag ggt caa tcc acc cta ctg atg | | | 2307 |
| 133 | Lys Ile Glu Ser Gly His Ile Lys Lys Gly Gln Ser Thr Leu Leu Met | | | |
| 134 | 510 | 515 | 520 | |
| 135 | cct aac aaa acc gct gtg gaa att caa aat att tac aac gaa act gaa | | | 2355 |
| 136 | Pro Asn Lys Thr Ala Val Glu Ile Gln Asn Ile Tyr Asn Glu Thr Glu | | | |
| 137 | 525 | 530 | 535 | |
| 138 | aat gaa gtt gat atg gct atg tgt ggt gag caa gtt aaa cta aga atc | | | 2403 |
| 139 | Asn Glu Val Asp Met Ala Met Cys Gly Glu Gln Val Lys Leu Arg Ile | | | |
| 140 | 540 | 545 | 550 | 555 |
| 141 | aaa ggt gtt gaa gaa gac att tca cca ggt ttt gta cta aca tcg | | | 2451 |
| 142 | Lys Gly Val Glu Glu Asp Ile Ser Pro Gly Phe Val Leu Thr Ser | | | |
| 143 | 560 | 565 | 570 | |
| 144 | cca aag aac cct atc aag agt gtt acc aag ttt gta gct caa att gct | | | 2499 |

PAGE: 4

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/591,632

 DATE: 06/16/2000
 TIME: 19:54:42

Input Set: I591632.RAW

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 146 575 580 585
 147 att gta gaa tta aaa tct atc ata gca gcc ggt ttt tca tgt gtt atg 2547
 148 Ile Val Glu Leu Lys Ser Ile Ile Ala Ala Gly Phe Ser Cys Val Met
 149 590 595 600
 150 cat gtt cat aca gca att gaa gag gta cat att gtt aag tta ttg cac 2595
 151 His Val His Thr Ala Ile Glu Glu Val His Ile Val Lys Leu Leu His
 152 605 610 615
 153 aaa tta gaa aag ggt acc aac cgt aag tca aag aaa cca cct gct ttt 2643
 154 Lys Leu Glu Lys Gly Thr Asn Arg Lys Ser Lys Lys Pro Pro Ala Phe
 155 620 625 630 635
 156 gct aag aag ggt atg aag gtc atc gct gtt tta gaa act gaa gct cca 2691
 157 Ala Lys Lys Gly Met Lys Val Ile Ala Val Leu Glu Thr Glu Ala Pro
 158 640 645 650
 159 gtt tgt gtg gaa act tac caa gat tac cct caa tta ggt aga ttc act 2739
 160 Val Cys Val Glu Thr Tyr Gln Asp Tyr Pro Gln Leu Gly Arg Phe Thr
 161 655 660 665
 162 ttg aga gat caa ggt acc aca ata gca att ggt aaa att gtt aaa att 2787
 163 Leu Arg Asp Gln Gly Thr Thr Ile Ala Ile Gly Lys Ile Val Lys Ile
 164 670 675 680
 165 gcc gag taa atttcttgca aacataagta aatgcaaaca caataatacc 2836
 166 Ala Glu
 167 685
 168 gatcataaaag cattttcttc tatattaaaa aacaagggtt aataaagctg ttatataat 2896
 169 atatatatat atagacgtat aattagtttta gttctttttt taccatatac cataaacaag 2956
 170 gtaaaacctca cctctcaata tatctagaat ttcataaaaa tatcttagcaa ggtttcaact 3016
 171 cttcaatca cgccccatc ataacccttc cccggcggtta tttcagaatg tgcaaaatct 3076
 172 attagtgaca tggaaactcaa agaaccagtt gtttttttgt ccttggtcc ttgcgtgttt 3136
 173 ccctcgccat catcatcatc atcatcatca ttatcatcat cgtcgatcatc atcgatctata 3196
 174 aaatcatctc gcataagttt gtcaacatca tttagtaatt cccatcgctc cgggtctcct 3256
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 187 35 40 45
 188 Tyr Gln Gly Tyr Ser Gly Tyr Gln Gln Gly Gly Tyr Gln Gln Tyr Asn
 189 50 55 60
 190 Pro Asp Ala Gly Tyr Gln Gln Gln Tyr Asn Pro Gln Gly Gly Tyr Gln
 191 65 70 75 80
 192 Gln Tyr Asn Pro Gln Gly Gly Tyr Gln Gln Gln Phe Asn Pro Gln Gly
 193 85 90 95
 194 Gly Arg Gly Asn Tyr Lys Asn Phe Asn Tyr Asn Asn Ash Leu Gln Gly

PAGE: 5

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/591,632

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 TIME: 19:54:42

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| | | | |
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| 197 | 115 | 120 | 125 |
| 198 | Phe Gln Lys Gln Gln Lys Gln Ala Ala Pro Lys Pro Lys Lys Thr Leu | | |
| 199 | 130 | 135 | 140 |
| 200 | Lys Leu Val Ser Ser Ser Gly Ile Lys Leu Ala Asn Ala Thr Lys Lys | | |
| 201 | 145 | 150 | 155 |
| 202 | Val Gly Thr Lys Pro Ala Glu Ser Asp Lys Lys Glu Glu Glu Lys Ser | | |
| 203 | 165 | 170 | 175 |
| 204 | Ala Glu Thr Lys Glu Pro Thr Lys Glu Pro Thr Lys Val Glu Glu Pro | | |
| 205 | 180 | 185 | 190 |
| 206 | Val Lys Lys Glu Glu Lys Pro Val Gln Thr Glu Glu Lys Thr Glu Glu | | |
| 207 | 195 | 200 | 205 |
| 208 | Lys Ser Glu Leu Pro Lys Val Glu Asp Leu Lys Ile Ser Glu Ser Thr | | |
| 209 | 210 | 215 | 220 |
| 210 | His Asn Thr Asn Asn Ala Asn Val Thr Ser Ala Asp Ala Leu Ile Lys | | |
| 211 | 225 | 230 | 235 |
| 212 | Glu Gln Glu Glu Val Asp Asp Glu Val Val Asn Asp Met Phe Gly | | |
| 213 | 245 | 250 | 255 |
| 214 | Gly Lys Asp His Val Ser Leu Ile Phe Met Gly His Val Asp Ala Gly | | |
| 215 | 260 | 265 | 270 |
| 216 | Lys Ser Thr Met Gly Gly Asn Leu Leu Tyr Leu Thr Gly Ser Val Asp | | |
| 217 | 275 | 280 | 285 |
| 218 | Lys Arg Thr Ile Glu Lys Tyr Glu Arg Glu Ala Lys Asp Ala Gly Arg | | |
| 219 | 290 | 295 | 300 |
| 220 | Gln Gly Trp Tyr Leu Ser Trp Val Met Asp Thr Asn Lys Glu Glu Arg | | |
| 221 | 305 | 310 | 315 |
| 222 | Asn Asp Gly Lys Thr Ile Glu Val Gly Lys Ala Tyr Phe Glu Thr Glu | | |
| 223 | 325 | 330 | 335 |
| 224 | Lys Arg Arg Tyr Thr Ile Leu Asp Ala Pro Gly His Lys Met Tyr Val | | |
| 225 | 340 | 345 | 350 |
| 226 | Ser Glu Met Ile Gly Gly Ala Ser Gln Ala Asp Val Gly Val Leu Val | | |
| 227 | 355 | 360 | 365 |
| 228 | Ile Ser Ala Arg Lys Gly Glu Tyr Glu Thr Gly Phe Glu Arg Gly Gly | | |
| 229 | 370 | 375 | 380 |
| 230 | Gln Thr Arg Glu His Ala Leu Leu Ala Lys Thr Gln Gly Val Asn Lys | | |
| 231 | 385 | 390 | 395 |
| 232 | Met Val Val Val Val Asn Lys Met Asp Asp Pro Thr Val Asn Trp Ser | | |
| 233 | 405 | 410 | 415 |
| 234 | Lys Glu Arg Tyr Asp Gln Cys Val Ser Asn Val Ser Asn Phe Leu Arg | | |
| 235 | 420 | 425 | 430 |
| 236 | Ala Ile Gly Tyr Asn Ile Lys Thr Asp Val Val Phe Met Pro Val Ser | | |
| 237 | 435 | 440 | 445 |
| 238 | Gly Tyr Ser Gly Ala Asn Leu Lys Asp His Val Asp Pro Lys Glu Cys | | |
| 239 | 450 | 455 | 460 |
| 240 | Pro Trp Tyr Thr Gly Pro Thr Leu Leu Glu Tyr Leu Asp Thr Met Asn | | |
| 241 | 465 | 470 | 475 |
| 242 | His Val Asp Arg His Ile Asn Ala Pro Phe Met Leu Pro Ile Ala Ala | | |
| 243 | 485 | 490 | 495 |
| 244 | Lys Met Lys Asp Leu Gly Thr Ile Val Glu Gly Lys Ile Glu Ser Gly | | |

PAGE: 6

VERIFICATION SUMMARY
PATENT APPLICATION US/09/591,632

DATE: 06/16/2000
TIME: 19:54:42

Input Set: I591632.RAW

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